**BACnet**

BACnet on-board

Addendum manual for installation and operation
for use with DL II, ME II, RS II and RO-E

Thank you for choosing Condair

Installation date (MM/DD/YYYY):

Commissioning date (MM/DD/YYYY):

Site:

Model:

Serial number:

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1 Introduction

1.1 Notes on this addendum manual

Condair devices equipped with an Integrated Controller can be connected via the corresponding interface on the Integrated Controller (BACnet on-board) to a BACnet IP network or a BACnet MS/TP network.

This manual describes how to install and configure BACnet on-board (see [Section 3](#)) to connect Condair devices with Integrated Controller to a building management system.

This addendum manual is intended for use by engineers and properly trained technical personnel. Please read this manual thoroughly before working on the Integrated Controller.

If you have questions after reading this documentation, please contact your Condair representative. They will be glad to assist you.

Symbols used in this manual



CAUTION!

The catchword "CAUTION" used in conjunction with the general caution symbol designates notes in this manual that, if neglected, may cause **damage and/or malfunction of the unit or other material assets**.



WARNING!

The catchword "WARNING" used in conjunction with the general caution symbol designates safety and danger notes in this manual that, if neglected, may cause **injury to persons**.



DANGER!

The catchword "DANGER" used in conjunction with the general caution symbol designates safety and danger notes in this manual that, if neglected, may lead to **severe injury or even death of persons**.

Safekeeping

Please safeguard this addendum manual in a safe place, where it can be immediately accessed. If the equipment changes hands, the documentation must be passed on to the new operator.

If the documentation gets mislaid, please contact your Condair representative for replacement.

Language versions

This addendum manual is available in various languages. Please contact your Condair representative for information.

1.2 Functions overview

The following table gives you an overview of the supported protocols and functions.

| | BACnet on-board Integrated controller |
|--------------------------------------|--|
| BACnet IP | yes |
| BACnet MS/TP Master Mode | yes |
| BACnet MS/TP Slave Mode | yes |
| BTL certified | yes |
| BACnet Service COV (Change of Value) | yes |

Please refer to the BACnet Protocol Implementation Conformance Statement (PICS, see [Section 6.2](#)) and the objects tables (see [Section 4](#)) for detailed information.

2 For your safety

General

Every person working with the Condair Integrated Controller must have read and understood this addendum manual, and the installation manual and operation manual of the Condair Integrated Controller, before carrying out any work.

Knowing and understanding the contents of the manuals is a basic requirement for protecting the personnel against any kind of danger, to prevent faulty operation, and to operate the unit safely and correctly.

All icons, signs and markings applied to the unit must be observed and kept in readable state.

Qualification of personnel

All work described in this addendum manual **may only be carried out by specialists who are well trained and adequately qualified and are authorised by the customer.**

For safety and warranty reasons any action beyond the scope of this manual must be carried out only by qualified personnel authorised by the manufacturer.

It is assumed that all persons working with the Condair Integrated Controller are familiar and comply with the appropriate local regulations on work safety and the prevention of accidents.

Intended use

The BACnet on-board interfaces Condair Integrated Controller are intended exclusively for connecting the Condair Integrated Controller to a BACnet based network. Any other type of application, without the written consent of the manufacturer, is considered as not conforming with the intended purpose and may lead to the Condair Integrated Controller becoming dangerous.

Operation of the equipment in the intended manner requires **that all the information contained in this addendum manual as well as in the installation manual and operation manual of the Condair Integrated Controller are observed.**

Danger that may arise from the Condair Integrated Controller



DANGER!
Risk of electric shock!

The control unit where the Integrated Controller is located is mains powered. Live parts may be exposed when the control unit is open. Touching live parts may cause severe injury or danger to life.

Prevention: Before commencing any work disconnect the corresponding Condair device from the mains supply via the electrical isolator in the mains supply line, and secure electrical isolator in "Off" position against inadvertent switching on.

Safety reporting

All persons working with the Condair Integrated Controller are obliged to report any alterations to the system that may affect safety to the owner without delay and to **secure such systems against accidental power-up**.

Prohibited modifications to the unit

No modifications must be undertaken on the Condair Integrated Controller without the express written consent of the manufacturer.

For the replacement of defective components use exclusively **original accessories and spare parts** available from your Condair representative.

3 Network integration via BACnet on-board

3.1 Notes for the planning engineer

3.1.1 Overview

The BACnet on-board functionality of the Integrated Controllers allows to connect Condair devices via the RJ45 Ethernet interface to a BACnet IP network or via the RS485 interface to a BACnet MS/TP network without further options.

The following protocol options are available as standard:

| Interface on the Integrated Controller | Protocol | Description |
|--|--------------|-----------------------------------|
| RJ45 Ethernet port | BACnet IP | BACnet IP |
| RS485 interface | BACnet MS/TP | BACnet MS/TP Master or Slave Mode |

Please refer to the BACnet object tables in [Section 4](#) for detailed information regarding the available read out and settings functions.

3.1.2 Principle network diagrams

3.1.2.1 Principle BACnet IP network

The principle diagram below shows the connection of the Condair Integrated Controller to a BACnet IP network.

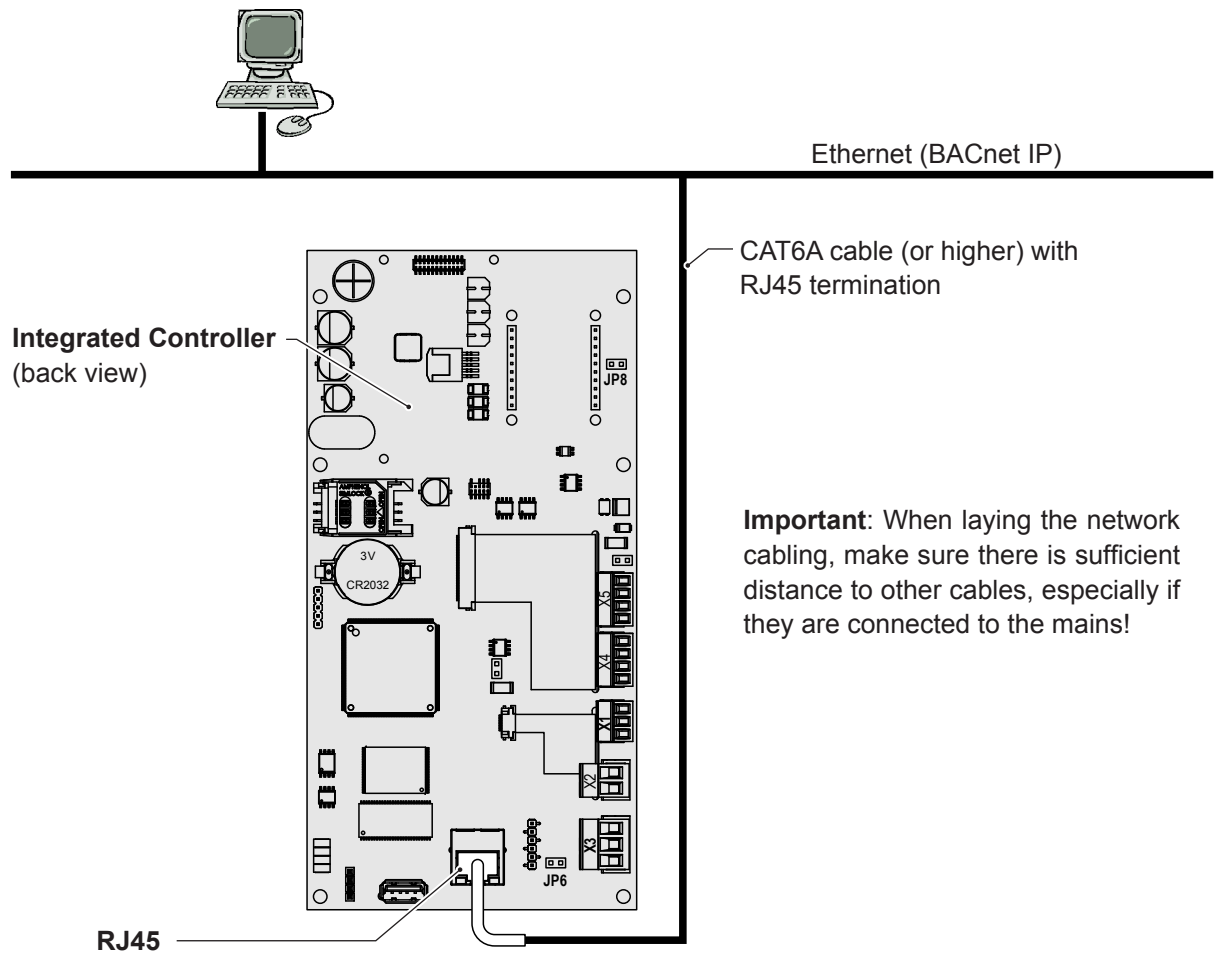


Fig. 1: Principle BACnet IP network

3.1.2.2 Principle BACnet MS/TP network

The diagram below shows the connection of a Condair Integrated Controller to a BACnet MS/TP network. The diagram also shows an application encountered in practice: BACnet MS/TP communicates with the higher-level BACnet IP via a router.

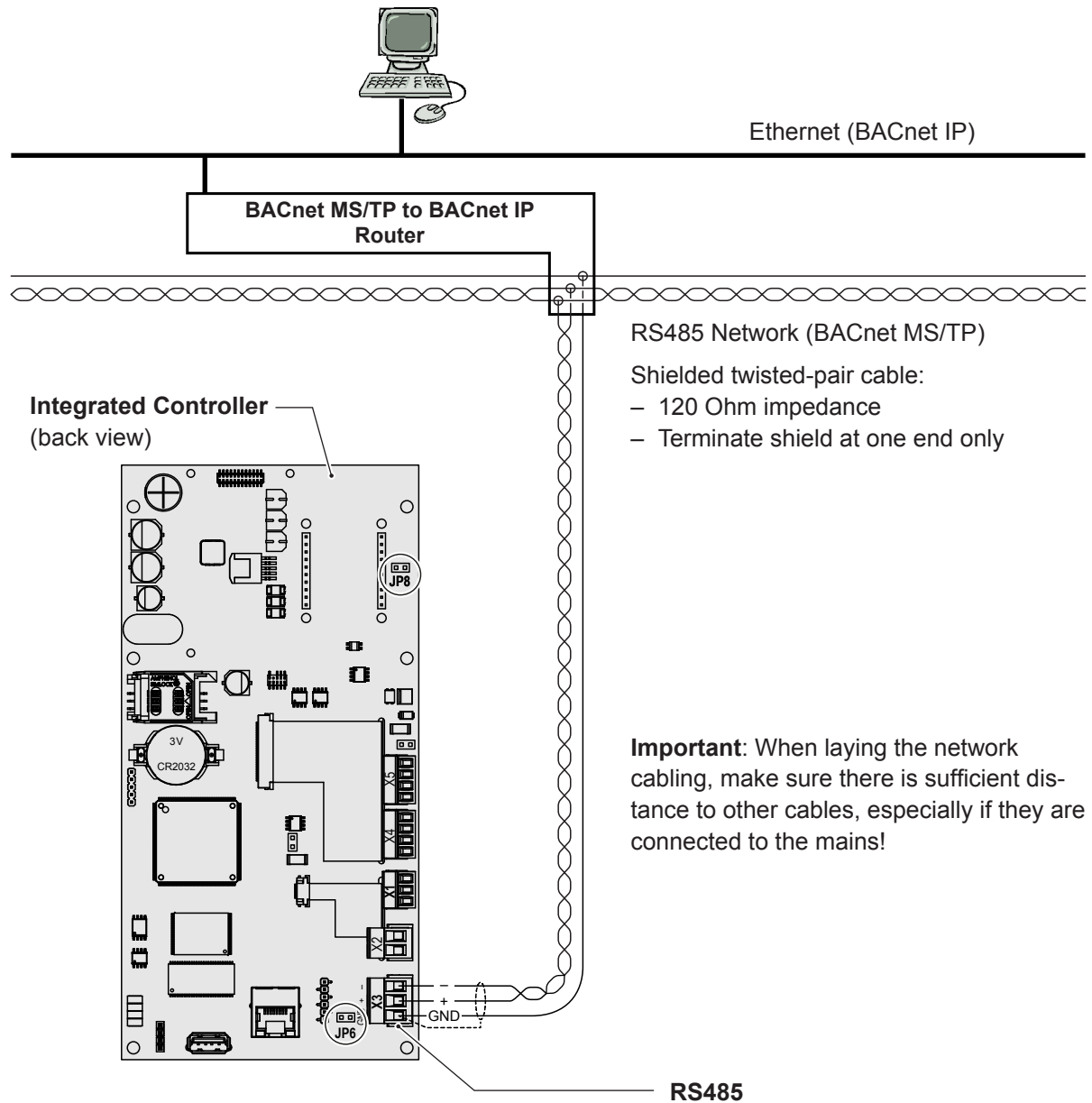
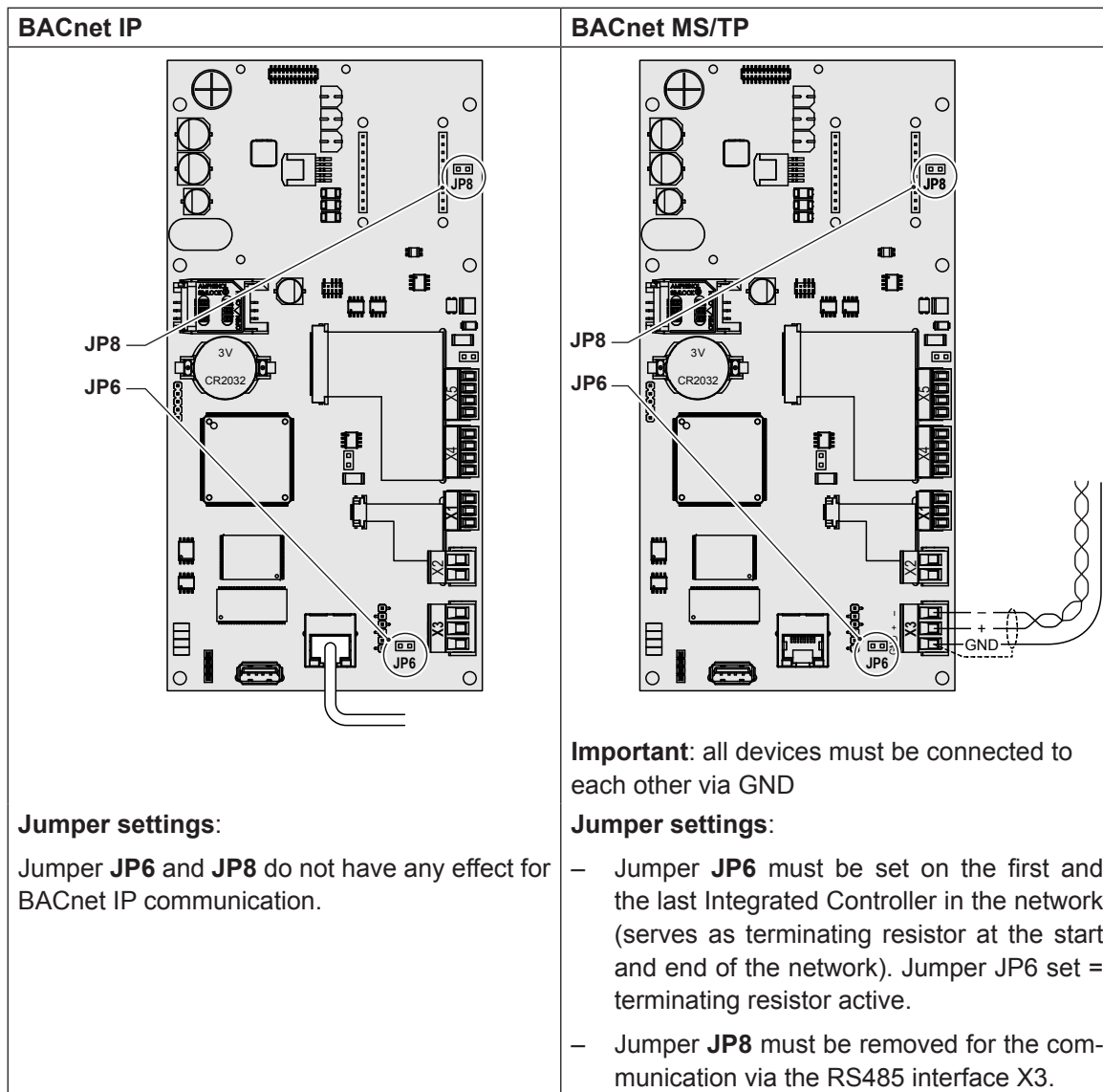


Fig. 2: Principle BACnet MS/TP network

3.2 Wiring

1. Lead the network cable through a cable gland or the rectangular cable lead-through into the control unit.
2. Connect network cable according to the following wiring diagrams to the corresponding interface connector on the Integrated Controller.



3.3 Configuration

After network wiring connections have been completed, the Condair Integrated Controller needs to be setup to operate and communicate through BACnet IP or BACnet MS/TP with the building management system. This setup includes the settings in the **"Network"** and the **"Controls"** submenu of the Integrated Controller.

3.3.1 Setup network parameters (or IP parameters)

The network settings (or IP parameters) are required for communication via the integrated Ethernet interface (RJ45).

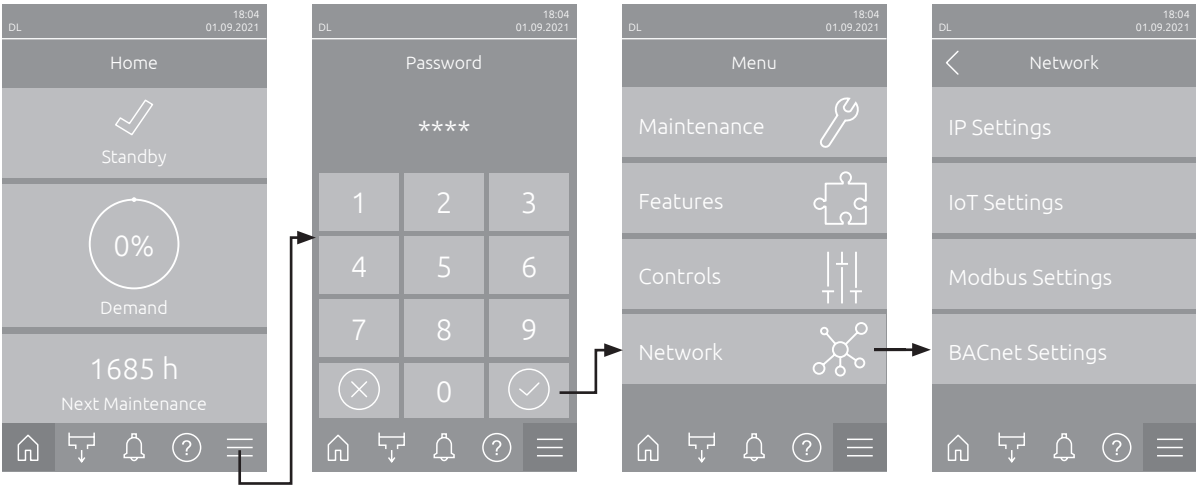
Select **"IP Settings"** (Path: **"Menu > Password: 8808 > Network > IP Settings"**). The IP setting parameters appear.

- **DHCP Mode:** With this setting you determine whether the IP Address, the Subnet Mask, the Standard Gateway as well as the Primary and Secondary DNS address should be assigned as fixed values or dynamically assigned via a DHCP server.
Note: If no address can be assigned via a DHCP server when "DHCP Mode" is set to "DHCP", an APIPA (Automatic Private IP Addressing) is automatically assigned. This is in the range from 169.254.1.0 to 169.254.254.255. The subnet mask is set to 255.255.0.0 and the standard gateway remains 0.0.0.0.
Factory setting: **DHCP**
Options: **DHCP** (dynamic assignment)
Fixed (fixed assignment)
- **IP Address:** This field shows the actual IP address of the device assigned manually or assigned by a DHCP server.
If the parameter "DHCP Mode" is set to "Fixed", the IP address of the device can be set via this field. If the parameter "DHCP Mode" is set to "DHCP", the IP address of the device is assigned by a DHCP server.
- **Subnet Mask:** This field shows the actual subnet mask of the IP network assigned manually or assigned by a DHCP server.
If the parameter "DHCP Mode" is set to "Fixed", the subnet mask can be set via this field. If the parameter "DHCP Mode" is set to "DHCP", the subnet mask is assigned by a DHCP server.

- **Default Gateway:** This field shows the actual IP address of the default gateway assigned manually or assigned by a DHCP server.
If the parameter "DHCP Mode" is set to "Fixed", the IP address of the default gateway can be set via this field. If the parameter "DHCP Mode" is set to "DHCP", the IP address of the default gateway is assigned by a DHCP server.
- **Primary DNS:** This field shows the actual IP address of the primary domain name server (DNS) assigned manually or assigned by a DHCP server.
If the parameter "DHCP Mode" is set to "Fixed", the IP address of the primary domain name server can be set via this field. If the parameter "DHCP Mode" is set to "DHCP", the IP address of the primary domain name server is assigned by a DHCP server.
- **Secondary DNS:** This field shows the actual IP address of the secondary domain name server (DNS) assigned manually or assigned by a DHCP server.
If the parameter "DHCP Mode" is set to "Fixed", the IP address of the secondary domain name server can be set via this field. If the parameter "DHCP Mode" is set to "DHCP", the IP address of the secondary domain name server is assigned by a DHCP server.
- **MAC Address:** Factory set MAC Address (Media Access Control) of the device. Not modifiable.
- **Host Name:** Host Name of the device automatically generated by the control. Format: "IC_"+"Serial number of the device". Not modifiable.

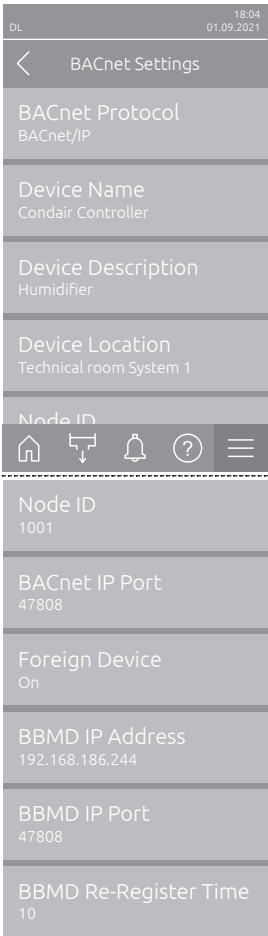
3.3.2 Setup BACnet interface parameters

Select **"BACnet Settings"** (Path: **"Menu > Password: 8808 > Network > BACnet Settings"**). The BACnet setting parameters appear.



3.3.2.1 BACnet IP settings

The following settings are required for BACnet communication via the integrated RJ45 interface.



- **BACnet Protocol:** Set the "BACnet Protocol" parameter to **"BACnet/IP"** to activate BACnet IP communication via the integrated RJ45 interface. After changing this setting, the control automatically carries out a restart.
Factory setting: **Off**
Options: **Off, MS/TP Master, MS/TP Slave or BACnet/IP**
- **Device Name:** With this setting you determine the name of the device for the communication via the integrated BACnet interface.
Note: The name assigned here is also assigned to the object name of the device object.
- **Device Description:** with this setting you determine a short description of the device.
Note: The device description assigned here is also assigned to the property "Description" in the device object.
- **Device Location:** With this setting you determine the designation of the device location.
Note: The location assigned is also assigned to the property "Location" in the device object.
- **Node ID:** With this setting you assign a node ID to the device for the communication over the BACnet IP protocol. This ID must be unique in the network.
Factory setting: **1001**
Setting range: **1 - 4194303**
- **BACnet IP Port:** With this setting you assign a IP port number for the device. The default port for BACnet IP is 47808.
Factory setting: **47808**
Setting range: **1 - 65535**

- **Foreign Device:** With this setting, you determine whether the device logs in to an external BACnet IP Broadcast Management Device (BBMD) ("On") so that it can receive broadcast messages (messages to all participants) on the IP network or not ("Off").

Note: In an IP network, routers generally block broadcast messages (messages to all participants) to reduce traffic. This prevents a BACnet IP device from being detected via the "Who-is" service, or to answer via the "I-Am" service. In order for the BACnet IP broadcast messages to be forwarded to other network segments anyway, a BBMD (BACnet IP Broadcast Management Device) is required. These devices integrated into the IP network forward BACnet IP broadcast messages to other network segments. Only one BBMD may be integrated per network segment.

Factory setting: **Off**

Options: **Off or On**

- **BBMD IP Address:** With this setting, you specify the IP address of the external BBMD to which the device should log on.
- **BBMD IP Port:** With this setting you assign an IP port number to the external BBMD.

Factory setting: **47808**

Setting range: **1 - 65535**

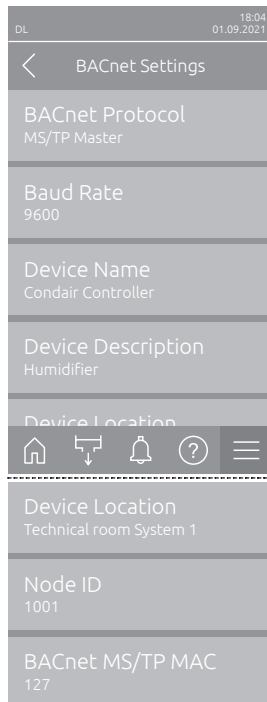
- **BBMD Re-Register Time:** With this setting you determine how long a device remains registered with an external BBMD (BACnet IP Broadcast Management Device) before a new registration is required.

Factory setting: **10**

Setting range: **5 - 65535**

3.3.2.2 BACnet MS/TP Einstellungen (Master oder Slave)

The following settings are required for BACnet MS/TP Master or Slave communication via the integrated RS485 interface.



- **BACnet Protocol:** Set the "BACnet Protocol" parameter either to "**MS/TP Master**" if the device is to act as the Master or to "**MS/TP Slave**" if the device is to act as a Slave. After changing this setting, the control automatically carries out a restart.
Factory setting: **Off**
Options: **Off, MS/TP Master, MS/TP Slave or BACnet/IP**
- **Baud Rate:** With this setting you set the Baudrate for the data transfer..
Factory setting: **9600**
Options: **9600, 19200, 38400, 57600, 76800, 115200**
- **Device Name:** With this setting you determine the name of the device for the communication via the integrated BACnet interface.
Note: The name assigned here is also assigned to the object name of the device object.
- **Device Description:** With this setting you determine a short description of the device.
Note: The device description assigned here is also assigned to the property "Description" in the device object.
- **Device Location:** with this setting you determine the designation of the device location.
Note: The location assigned is also assigned to the property "Location" in the device object.
- **Node ID:** with this setting you assign a node ID to the device for the communication over the BACnet MS/TP protocol. This ID must be unique in the network.
Factory setting: **1001**
Setting range: **1 - 4194303**
- **BACnet MS/TP MAC:** with this setting you assign a MS/TP MAC address for the device. This address must be unique in the network.
Factory setting: **127**
Setting range: **0 - 127 (for Master)**
0 - 254 (for Slave)

3.3.3 Signal settings and monitoring of bus communication

3.3.3.1 Signal settings

By default the Condair Integrated Controller is configured to operate on a hardwired analog control signal from an external humidity controller or a humidity sensor (if internal P or PI controller is used) connected to the driver board inside the control unit.

Note: If you want the Condair Integrated Controller to be controlled via a hardwired analog control signal set "Source" to "Analog" and set the other control settings as required (see "Operation Manual" of the corresponding device for details).

If you want to control the Condair Integrated Controller via one of the integrated BACnet on-board interfaces the "Signal Settings" must be adjusted as follows.

Select "**Signal Settings**" (Path: "**Menu > Password: 8808 > Controls > Signal Settings**"). The setting parameters for the signal transmission appear.

- **Source:** Set "Source" parameter to "**BACnet**".
Factory setting: **Analog**
Options: **Analog, Modbus, BACnet or IoT**
- **Control Mode:** Set the "Control Mode" parameter to "**Demand**" (demand signal from an external controller) or to "**RH P**" or "**RH PI**" (humidity signal from an external humidity sensor).
Factory setting: **Demand**
Options: **On/Off, Demand, RH P or RH PI**
- **Signal Timeout:** With this setting you determine the timeout period for the signal transmission. If communication with the BACnet system fails for longer than the set time, warning "W35 - Signal Timeout" is triggered and the Condair DL is stopped.
Factory setting: **300 s**
Setting range: **1 ... 300 s**

Important: If the demand or control signal via BACnet is used, no second, hard-wired demand or control signal may be connected to the driver board!

Further information on the control settings can be found in the operating instructions for the corresponding device.

3.3.3.2 Monitoring of bus communication

The monitoring of the bus communication described below only takes place if the "Source" parameter in the "Signal Settings" submenu is not set to "Analog" (siehe [Section 3.3.3.1](#)).

As soon as the control signal (demand or humidity signal) is transmitted via the BACnet IP or BACnet MS/TP bus system, communication via the bus system is also monitored.

The control signal must be periodically updated within the time set in "Signal Timeout".

If the control signal is not updated within the set time, warning "W35 - Signal Timeout" will be triggered and the humidification will be stopped until the device receives an updated value.

This monitoring is intended to prevent the humidifier from humidifying with the last transmitted value in the event of a bus failure.

4 Communication tables

4.1 Condair DL - BACnet on-board

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|--------------------|--|--|--------------|-----------|-----------------------|
| Condair Controller | Humidifier | — | DEV | 1001 | — |
| Network Port IPv4 | Network-Port for BACnet IPv4 Communication | — | Network Port | 1 | R/W |
| Device Status | Actual device status | 1 = Initializing 2 = Diagnostic 3 = Stopped 4 = Flushing 5 = Standby 6 = Humidifying 7 = Ready 8 = Air Cleaning 9 = Filling 10 = Conductivity Flush 11 = Switched Off 12 = Remote Off 13 = Temperature Flush 14 = Ceramic Wash Over | MI | 5154 | R |
| Error Status | Maintenance and error status | 1 = No Info 2 = Warning 3 = Activation Code 4 = Out of Commissioning 5 = Refill Disinfection 6 = Maintenance 7 = Error 8 = Replace Ag Cartridge 9 = Disinfection | MI | 5155 | R |
| DL Type | Condair DL device assembly configuration | 1 = Humidifier 2 = Humidifier + FC 3 = Humidifier + FC - Off | MI | 5089 | R |

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|-------------------------|---|---------------------------------|-------------|-----------|-----------------------|
| ErrorWarning Code | Code of the latest pending error or warning ³⁾ | 0 = no Error | AI | 10020 | R |
| Operating Hours | Total hours of operation since commissioning | 0 - 1200000 h | AI | 10044 | R |
| Next Maintenance | Due date of next maintenance in operating hours | 0 - 10000 h | AI | 10060 | R |
| Humidity Control | Actual humidity or demand | 0 - 100 % | AI | 15068 | R |
| Max. Hum. Capacity | Maximum possible spray water output ²⁾ | 2 - 1000 kg/h 4 - 2573 lb/hr | AI | 15172 | R |
| Actual Hum. Capacity | Actual spray water output ²⁾ | 0 - 1000 kg/h 0 - 2573 lb/hr | AI | 15174 | R |
| Remain. Ag-Ion Capacity | Remaining Ag-Ion capacity | 0 - 58.4 Ah | AI | 15154 | R |
| Target Ag-Ion Current | Target Ag-Ion current | 0 - 29.2 mA | AI | 15179 | R |
| PS4 Inlet Pressure | Inlet pressure PS4 ²⁾ | 0 - 10.0 bar 0 - 145.0 psi | AI | 15170 | R |
| PS5 Nozzle Pressure | Nozzle pressure PS5 ²⁾ | 0 - 10.0 bar 0 - 145.0 psi | AI | 15171 | R |
| Water Temperature | Inlet water temperature ^{1) 2)} | °C or °F | AI | 15169 | R |

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|--------------------|--------------------------|-----------|-------------|-----------|-----------------------|
| Water Conductivity | Inlet water conductivity | µS/cm | AI | 15168 | R |
| Pump Current | Pump current | 0 - 5.0 A | AI | 15148 | R |
| Ag-Ion Current | Ag-Ion current | mA | AI | 15027 | R |

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|---------------------|---|--|-------------|-----------|-----------------------|
| Setpoint | Humidity setpoint | 0 - 95 % | AV | 15050 | R/W |
| P-Band | Proportional band | 6 - 65 % | AV | 15051 | R/W |
| I-Time | Integral time | 1 - 60 min | AV | 15052 | R/W |
| Capacity Limitation | Limitation of the maximum possible output | 20 - 100 % | AV | 15058 | R/W |
| Flushing | Remote flush | Read: 100 = Off 0-100 = Progress flushing in % Write: 0 = Stop flushing 1 = Start flushing | AV | 30506 | R/W |
| Ceramic Wash Over | Remote ceramic wash over | Read: 100 = Off 0-100 = Progress ceramic wash over in % Write: 0 = Stop ceramic wash over 1 = Start ceramic wash over | AV | 30507 | R/W |
| Rh or Demand | Actual humidity or demand via BACnet | 0 - 100 % Relinquish Default = 0 | AO | 15059 | R/W |

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|-----------------------|---------------------------------|-----------------------------|-------------|-----------|-----------------------|
| Safety Loop | Safety loop | 0 = Open 1 = Closed (ok) | BI | 5002 | R |
| Y1 Inlet Valve | Y1 inlet valve | 0 = Closed 1 = Open | BI | 5156 | R |
| Y2 Reserve | Y2 valve | 0 1 | BI | 5157 | R |
| Y3 Air Cleaning | Y3 valve air cleaning | 0 = Closed 1 = Open | BI | 5158 | R |
| Y4 Ext. Pipe Flush | Y4 valve external pipe flush | 0 = Closed 1 = Open | BI | 5159 | R |
| Y5 Spray Valve | Y5 valve for spray circuit 1 | 0 = Closed 1 = Open | BI | 5160 | R |
| Y6 Spray Valve | Y6 valve for spray circuit 2 | 0 = Closed 1 = Open | BI | 5161 | R |
| Y7 Spray Valve | Y7 valve for spray circuit 3 | 0 = Closed 1 = Open | BI | 5162 | R |
| Y8 Spray Valve | Y8 valve for spray circuit 4 | 0 = Closed 1 = Open | BI | 5163 | R |
| Y9 Spray Valve | Y9 valve for spray circuit 5 | 0 = Closed 1 = Open | BI | 5164 | R |
| Y10 Drain Valve | Y10 valve drain (NO) | 0 = Open 1 = Closed | BI | 5165 | R |
| Y11 Aux. Outlet Valve | Y11 auxiliary outlet valve | 0 = Open 1 = Closed | BI | 5166 | R |
| FC Enable | Frequency converter enable | 0 = Off 1 = On | BI | 5170 | R |
| FC Status | Frequency converter status | 0 = Off 1 = On | BI | 5167 | R |

¹⁾ optional

²⁾ According to the settings <Imperial> or <Metric> in the DL controller software

³⁾ Refer to malfunction list in the Condair DL operation manual for a description of the malfunction codes

4.2 Condair ME - BACnet on-board

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|--------------------|--|---|--------------|-----------|-----------------------|
| Condair Controller | Humidifier | — | DEV | 1001 | — |
| Network Port IPv4 | Network-Port for BACnet IPv4 Communication | — | Network Port | 1 | R/W |
| Device Status | Actual device status | 1 = Initializing 2 = Diagnostic 3 = Stopped 4 = Humidifying 5 = Cooling 6 = Holding 7 = Draining 8 = Refreshing 9 = Filling 10 = Standby 11 = Diluting 12 = Assisted Draining 13 = Bleeding 14 = Softstart 15 = Switched Off 16 = Remote Off 17 = Purging 18 = Drain Check | MI | 5050 | R |
| Error Status | Maintenance and error status | 1 = No Info 2 = Warning 3 = Maintenance 4 = WET Tank empty 5 = Replace PureFlo Cartridge 6 = Replace UV Lamp 7 = Matrix Wash Over 8 = Out of Commissioning 9 = Activation Code 10 = Error 11 = Disinfection Tank empty | MI | 5051 | R |

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|--------------------------|---|--|-------------|-----------|-----------------------|
| Water Level Tank | Water level tank | 0 = Level 0 1 = Level 1 2 = Level 2 3 = Level 3 4 = Level 4 5 = Level 5 6 = Level 6 7 = Level 7 | AI | 15176 | R |
| Error/Warning Code | Code of the latest pending error or warning ²⁾ | 0 = no Error | AI | 10020 | R |
| Operating Hours | Total hours of operation since commissioning | 0 - 1200000 h | AI | 10044 | R |
| Next Maintenance | Due date of next maintenance in operating hours | 0 - 10000 h | AI | 10060 | R |
| Next UV Lamp Exchange | Due date of next UV Lamp exchange in days | 0 - 450 d | AI | 15171 | R |
| Next PureFlo Exchange | Due date of next PureFlo exchange in days | 0 - 365 d | AI | 15172 | R |
| Humidity Control | Actual humidity or demand | 0 - 100 % | AI | 15047 | R |
| Temperature Control | Actual air temperature ¹⁾ | °C or °F | AI | 15048 | R |
| UV Current | Actual UV current | 0 - 4.0 A | AI | 15019 | R |
| Actual Stages | Number of running stages | 0 - 7 stages | AI | 15112 | R |
| Capacity 1 | Water capacity stage 1 ¹⁾ | 1.0 - 360.0 kg/h 2.2 - 793.7 lb/hr | AI | 15086 | R |
| Capacity 2 | Water capacity stage 2 ¹⁾ | 1.0 - 360.0 kg/h 2.2 - 793.7 lb/hr | AI | 15087 | R |
| Capacity 3 | Water capacity stage 3 ¹⁾ | 1.0 - 360.0 kg/h 2.2 - 793.7 lb/hr | AI | 15088 | R |
| Capacity 4 | Water capacity stage 4 ¹⁾ | 1.0 - 360.0 kg/h 2.2 - 793.7 lb/hr | AI | 15089 | R |
| Capacity 5 | Water capacity stage 5 ¹⁾ | 1.0 - 360.0 kg/h 2.2 - 793.7 lb/hr | AI | 15090 | R |
| Capacity 6 | Water capacity stage 6 ¹⁾ | 1.0 - 360.0 kg/h 2.2 - 793.7 lb/hr | AI | 15091 | R |
| Capacity 7 | Water capacity stage 7 ¹⁾ | 1.0 - 360.0 kg/h 2.2 - 793.7 lb/hr | AI | 15092 | R |
| Speed Pump 1 | Actual speed pump 1 | 0 - 100 % | AI | 15130 | R |
| Speed Pump 2 | Actual speed pump 2 | 0 - 100 % | AI | 15131 | R |
| Speed Pump 3 | Actual speed pump 3 | 0 - 100 % | AI | 15132 | R |
| Speed Pump 4 | Actual speed pump 4 | 0 - 100 % | AI | 15133 | R |
| Speed Pump 5 | Actual speed pump 5 | 0 - 100 % | AI | 15134 | R |
| Speed Pump 6 | Actual speed pump 6 | 0 - 100 % | AI | 15135 | R |
| Speed Pump 7 | Actual speed pump 7 | 0 - 100 % | AI | 15136 | R |
| Water Conductivity | Water conductivity tank | µS/cm | AI | 15077 | R |
| Water Temperature | Actual water temperature ¹⁾ | °C or °F | AI | 15075 | R |
| Incoming Air Temperature | Incoming air temperature ¹⁾ | °C or °F | AI | 15049 | R |

¹⁾ According to the settings <Imperial> or <Metric> in the ME controller software.

²⁾ See Error code description in the malfunction list in the ME operation manual.

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|----------------------|---|---|-------------|-----------|-----------------------|
| Setpoint Humidifying | Setpoint humidity control | 0 - 95 % | AV | 15054 | R/W |
| P-Band Humidifying | Proportional band humidity control | 6 - 65 % | AV | 15055 | R/W |
| I-Time Humidifying | Integral time humidity control | 1 - 60 min | AV | 15056 | R/W |
| Setpoint Cooling | Setpoint temperature control ¹⁾ | 0 - 40 °C 32 - 104 °F | AV | 15057 | R/W |
| P-Band Cooling | Proportional band temperature control ¹⁾ | 1 - 50 °C 1.8 - 89.9 °F | AV | 15058 | R/W |
| I-Time Cooling | Integral time temperature control | 1 - 60 min | AV | 15059 | R/W |
| Draining | Remote draining | Read: 100 = Off 0-100 = Progress draining in % Write: 0 = Stop draining 1 = Start draining | AV | 30507 | R/W |
| Matrix Wash Over | Remote matrix wash over | Read: 100 = Off 0-100 = Progress matrix wash over in % Write: 0 = Stop matrix wash over 1 = Start matrix wash over | AV | 30505 | R/W |
| Error/Warning Reset | Remote Error/Warning Reset | 0 = Off 1 = On | AV | 30002 | R/W |
| RH or Demand | Actual humidity or demand via BACnet | 0 - 100% Relinquish Default = 0 | AO | 15044 | R/W |
| Temperature | Actual temperature via BACnet ¹⁾ | -25 - 100 °C -12.9 - 211.9 °F Relinquish Default = 20 | AO | 15045 | R/W |

¹⁾ According to the settings <Imperial> or <Metric> in the ME controller software.

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|--------------------------|--------------------------|-----------------------------|-------------|-----------|-----------------------|
| Safety Loop | Safety loop | 0 = Open 1 = Closed (ok) | BI | 5002 | R |
| Drain Valve | Drain valve | 0 = Open 1 = Closed | BI | 5034 | R |
| Inlet Valve | Inlet valve | 0 = Closed 1 = Open | BI | 5033 | R |
| Drain Pump | Drain pump | 0 = Off 1 = On | BI | 5091 | R |
| Pump 1 Error | Fault pump 1 | 0 = Fault 1 = Ok | BI | 5111 | R |
| Pump 2 Error | Fault pump 2 | 0 = Fault 1 = Ok | BI | 5112 | R |
| Pump 3 Error | Fault pump 3 | 0 = Fault 1 = Ok | BI | 5113 | R |
| Pump 4 Error | Fault pump 4 | 0 = Fault 1 = Ok | BI | 5114 | R |
| Pump 5 Error | Fault pump 5 | 0 = Fault 1 = Ok | BI | 5115 | R |
| Pump 6 Error | Fault pump 6 | 0 = Fault 1 = Ok | BI | 5116 | R |
| Pump 7 Error | Fault pump 7 | 0 = Fault 1 = Ok | BI | 5117 | R |
| Water Inlet Error | Fault water inlet | 0 = Fault 1 = Ok | BI | 5118 | R |
| Water Outlet Error | Fault water outlet | 0 = Fault 1 = Ok | BI | 5119 | R |
| Water Temperature Error | Fault water temperature | 0 = Fault 1 = Ok | BI | 5120 | R |
| Level Sensor Error | Fault level sensor | 0 = Fault 1 = Ok | BI | 5122 | R |
| Water Conductivity Error | Fault water conductivity | 0 = Fault 1 = Ok | BI | 5121 | R |
| Leak Monitoring | Leakage sensor | 0 = Leak 1 = Ok | BI | 5009 | R |
| WET Tank Level | WET tank level | 0 = Empty 1 = Ok | BI | 5007 | R |
| Disinfection Tank Level | Disinfection tank level | 0 = Empty 1 = Ok | BI | 5008 | R |

4.3 Condair RS - BACnet on-board

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|----------------------|--|--|--------------|-----------|-----------------------|
| Condair Controller | Humidifier | — | DEV | 1001 | — |
| Network Port IPv4 | Network-Port for BACnet IPv4 Communication | — | Network Port | 1 | R/W |
| Device Status Cyl. A | Actual device status cylinder A | 1 = Initializing 2 = Diagnostic 3 = Stopped 4 = Break 5 = Level Test 6 = Standby 7 = Humidifying 8 = Filling 9 = Idle 10= Draining 11= Remote Off 12= Keep Warm | MI | 5109 | R |
| Device Status Cyl. B | Actual device status cylinder B | 1 = Initializing 2 = Diagnostic 3 = Stopped 4 = Break 5 = Level Test 6 = Standby 7 = Humidifying 8 = Filling 9 = Idle 10= Draining 11= Remote Off 12= Keep Warm | MI | 5110 | R |
| Error Status | Maintenance and error status | 1 = Service Info 2 = Warning 3 = RO Service 4 = Extended Maintenance 5 = Small Maintenance 6 = Activation Code 7 = Error | MI | 5159 | R |
| Nominal Voltage | Nominal voltage device | 1 = 200 V 2 = 208 V 3 = 230 V 4 = 240 V 5 = 380V 6 = 400 V 7 = 415 V 8 = 440 V 9 = 460 V 10= 480 V 11= 500 V 12= 550 V 13= 600 V | MI | 5123 | R |

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|-------------------------------|--|---|-------------|-----------|-----------------------|
| Level Cyl. A | Water level cylinder A | 1 = no level 2 = low 3 = low-mid 4 = mid 5 = mid-high 6 = high | AI | 15044 | R |
| Level Cyl. B | Water level cylinder B | 1 = no level 2 = low 3 = low-mid 4 = mid 5 = mid-high 6 = high | AI | 15045 | R |
| ErrorWarning Code | Code of the latest pending error or warning ³⁾ | 0 = No error | AI | 10020 | R |
| Operating Hours | Total hours of operation since commissioning | 0 - 1'200'000 h | AI | 10219 | R |
| Operating Hours Cyl. A | Total hours of operation since commissioning of cylinder A | 0 - 1'200'000 h | AI | 15124 | R |
| Operating Hours Cyl. B | Total hours of operation since commissioning of cylinder B | 0 - 1'200'000 h | AI | 15125 | R |
| System Demand | Actual demand of the system | 0 - 100% | AI | 10221 | R |
| Control CH1 | Actual humidity or demand signal CH1 | 0 - 100% | AI | 15103 | R |
| Control CH2 | Actual humidity or demand signal CH2 | 0 - 100% | AI | 15104 | R |
| Max Hum. Capacity | Maximum humidifying capacity ²⁾ | 5 - 160 kg/h 10 - 360 lb/hr | AI | 10216 | R |
| Max Hum. Capacity Cyl. A | Maximum humidifying capacity cylinder A ²⁾ | 5 - 40 kg/h 10 - 90 lb/hr | AI | 15117 | R |
| Max Hum. Capacity Cyl. B | Maximum humidifying capacity cylinder B ²⁾ | 5 - 40 kg/h 10 - 90 lb/hr | AI | 15118 | R |
| Actual Hum. Capacity | Actual humidifying capacity ²⁾ | 0 - 160 kg/h 0 - 360 lb/hr | AI | 10225 | R |
| Actual Hum. Capacity Cyl. A | Actual humidifying capacity cylinder A ²⁾ | 0 - 40 kg/h 0 - 90 lb/hr | AI | 15025 | R |
| Actual Hum. Capacity Cyl. B | Actual humidifying capacity cylinder B ²⁾ | 0 - 40 kg/h 0 - 90 lb/hr | AI | 15026 | R |
| Next Small Maintenance Cyl. A | Due date of next small maintenance cylinder A | 0 - 6000 h | AI | 15120 | R |
| Next Small Maintenance Cyl. B | Due date of next small maintenance cylinder B | 0 - 6000 h | AI | 15121 | R |
| Next Extended Maint. Cyl. A | Due date of next extended maintenance cylinder A | 0 - 6000 h | AI | 15122 | R |
| Next Extended Maint. Cyl. B | Due date of next extended maintenance cylinder B | 0 - 6000 h | AI | 15123 | R |

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|-----------------------------|--|--|-------------|-----------|-----------------------|
| Setpoint CH1 | Setpoint humidity channel 1 | 5 - 95 % | AV | 15094 | R/W |
| Setpoint CH2 | Setpoint humidity channel 2 | 5 - 95 % | AV | 15095 | R/W |
| P-Band CH1 | Proportional band humidity channel 1 | 6 - 65 % | AV | 15096 | R/W |
| P-Band CH2 | Proportional band humidity channel 2 | 6 - 65 % | AV | 15097 | R/W |
| I-Time CH1 | Integral time humidity channel 1 | 1 - 60 min | AV | 15098 | R/W |
| I-Time CH2 | Integral time humidity channel 2 | 1 - 60 min | AV | 15099 | R/W |
| Capacity Limitation | Limitation of the maximum possible output | 20 - 100 % | AV | 15102 | R/W |
| RS Drain | Remote RS drain | Read: 0..99 = Progress draining in % 100 = Off Write: 0 = Stop draining 1 = Start draining cylinder A + B | AV | 30504 | R/W |
| RS Drain Cyl. A | Remote RS drain cylinder A | Read: 0..99 = Progress draining in % 100 = Off Write: 0 = Stop draining 1 = Start draining cylinder A | AV | 30502 | R/W |
| RS Drain Cyl. B | Remote RS drain cylinder B | Read: 0..99 = Progress draining in % 100 = Off Write: 0 = Stop draining 1 = Start draining cylinder B | AV | 30503 | R/W |
| RH or Demand CH1 via BACnet | Actual humidity or demand via BACnet channel 1 | 0 - 100 % | AO | 15012 | R/W |
| RH or Demand CH2 via BACnet | Actual humidity or demand via BACnet channel 2 | 0 - 100 % | AO | 15014 | R/W |

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|-----------------------------|---|------------------------------|-------------|-----------|-----------------------|
| Overheat Switch Cyl. A | Overheat switch cylinder A | 0 = Open 1 = Closed (=ok) | BI | 5011 | R |
| Overheat Switch Cyl. B | Overheat switch cylinder B | 0 = Open 1 = Closed (=ok) | BI | 5012 | R |
| Safety Loop Cyl. A | External safety loop cylinder A | 0 = Open 1 = Closed (=ok) | BI | 5017 | R |
| Safety Loop Cyl. B | External safety loop cylinder B | 0 = Open 1 = Closed (=ok) | BI | 5018 | R |
| Security Floater Cyl. A | Security floater cylinder A | 0 = Open 1 = Closed (=ok) | BI | 5013 | R |
| Security Floater Cyl. B | Security floater cylinder B | 0 = Open 1 = Closed (=ok) | BI | 5014 | R |
| Heating Voltage Cyl. A | Heating voltage cylinder A | 0 = Off 1 = On | BI | 5015 | R |
| Heating Voltage Cyl. B | Heating voltage cylinder B | 0 = Off 1 = On | BI | 5016 | R |
| Blower Pack Cyl. A | Blower pack ready cylinder A | 0 = Off 1 = On (ready) | BI | 5021 | R |
| Blower Pack Cyl. B | Blower pack ready cylinder B | 0 = Off 1 = On (ready) | BI | 5022 | R |
| Main Contactor Cyl. A | Main contactor cylinder A | 0 = Off 1 = On | BI | 5027 | R |
| Main Contactor Cyl. B | Main contactor cylinder B | 0 = Off 1 = On | BI | 5028 | R |
| Relay Pump Cyl. A | Relay pump cylinder A | 0 = Off 1 = On | BI | 5029 | R |
| Relay Pump Cyl. B | Relay pump cylinder B | 0 = Off 1 = On | BI | 5030 | R |
| Inlet Valve 1 Cyl. A | Inlet valve 1 cylinder A | 0 = Closed 1 = Open | BI | 5089 | R |
| Inlet Valve 1 Cyl. B | Inlet valve 1 cylinder B | 0 = Closed 1 = Open | BI | 5090 | R |
| Inlet Valve 2 Cyl. A | Inlet valve 2 cylinder A | 0 = Closed 1 = Open | BI | 5091 | R |
| Inlet Valve 2 Cyl. B | Inlet valve 2 cylinder B | 0 = Closed 1 = Open | BI | 5092 | R |
| Drain Cooling Valve Cyl. A | Drain cooling valve cylinder A | 0 = Closed 1 = Open | BI | 5093 | R |
| Drain Cooling Valve Cyl. B | Drain cooling valve cylinder B | 0 = Closed 1 = Open | BI | 5094 | R |
| Complete Drain Valve Cyl. A | Complete drain valve cylinder A ¹⁾ | 0 = Closed 1 = Open | BI | 5095 | R |
| Complete Drain Valve Cyl. B | Complete drain valve cylinder B ¹⁾ | 0 = Closed 1 = Open | BI | 5096 | R |
| Leakage Sensor | Leakage Sensor ¹⁾ | 0 = Leak 1 = OK | BI | 5009 | R |
| Furnace Fan | Condair UL: Remote Furnace/Fan ¹⁾ | 0 = Off 1 = On | BI | 28 | R |
| Ext. Pipe Flush | Condair CE: Ext.Pipe Flush ¹⁾ | 0 = Off 1 = On | | | |

¹⁾ optional

²⁾ According to the settings <Imperial> or <Metric> in the RS controller software

³⁾ Refer to malfunction list in the Condair RS operation manual for a description of the malfunction codes

4.4 Condair RO-E - BACnet on-board

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|--------------------|--|---|--------------|-----------|-----------------------|
| Condair Controller | Water treatment | — | DEV | 1001 | — |
| Network Port IPv4 | Network-Port for BACnet IPv4 Communication | — | Network Port | 1 | R/W |
| RO Type | RO Type | 0 = RO-E 1 = RO-E+ | MI | 88 | R |
| RO Device Status | RO Status | 1 = Initializing 2 = Diagnostic 3 = Stopped 4 = Hold 5 = Filling 6 = Standby 7 = Flushing 8 = Refreshing 9 = Draining | MI | 121 | R |
| RO Service Status | UO Maintenance status | 1 = No Info 2 = Warning 3 = Warning Sys 4 = Warning Commissioning 5 = Warning Activation 6 = Error 7 = Warning Disinfection | MI | 122 | R |
| RO Capacity | UO Capacity ¹⁾ | 1 = 20 l/h / 5.3 gal/hr 2 = 40 l/h / 10.6 gal/hr 3 = 100 l/h / 26.4 gal/hr 4 = 200 l/h / 52.8 gal/hr 5 = 300 l/h / 79.3 gal/hr | MI | 134 | R |

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|--------------------------|------------------------------------|-------------------------------|-------------|-----------|-----------------------|
| ErrorWarning Code | Error Warning Code ²⁾ | 0 = No Error | AI | 10020 | R |
| RO Next Disinfection | Next Disinfection | 0 - 365 [Days] | AI | 10210 | R |
| RO Inlet Pressure | Inlet pressure ¹⁾ | 0 - 6 bar 0 - 87.0 psi | AI | 10141 | R |
| RO Tank Pressure | Tank pressure ¹⁾ | 0 - 6 bar 0 - 87.0 psi | AI | 10142 | R |
| RO Membrane Pressure | Membrane pressure ¹⁾ | 0 - 20 bar 0 - 290.0 psi | AI | 10143 | R |
| RO Permeate Conductivity | Permeate conductivity | 0 - 100 µS/cm | AI | 10144 | R |
| RO Water Temperature | Permeate temperature ¹⁾ | 0 - 60 °C 32 - 140 °F | AI | 10145 | R |
| RO Permeate Volume Flow | Permeate flow ¹⁾ | 0 - 400 l/h 0 - 106 gal/hr | AI | 10146 | R |
| RO Next Maintenance | Next maintenance | 0 - 4000 h | AI | 10150 | R |
| RO Operating Hours | Operating hours | 0 - 1200000 h | AI | 10238 | R |

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|----------------------|-----------------------|------------------------|-------------|-----------|-----------------------|
| RO Inlet Valve | Y11 Inlet valve | 0 = Closed 1 = Open | BI | 78 | R |
| RO Drain Valve | Y12 Drain valve | 0 = Open 1 = Closed | BI | 79 | R |
| RO Outlet Valve | Y13 Outlet valve | 0 = Open 1 = Closed | BI | 80 | R |
| RO Permeate Valve | Y15 Permeate valve | 0 = Drain 1 = Tank | BI | 81 | R |
| RO Concentrate Valve | Y16 Concentrate valve | 0 = Closed 1 = Open | BI | 82 | R |

| Object Name | Description | Range | Object-Type | Object-ID | Read (R) Write (W) |
|------------------------|-----------------------|---------------------------|-------------|-----------|-----------------------|
| RO Start Tank Pressure | Minimum tank pressure | 0 - 5 bar 0 - 72.5 psi | AV | 10127 | R/W |
| RO End Tank Pressure | Maximum tank pressure | 0 - 5 bar 0 - 72.5 psi | AV | 10128 | R/W |
| Error/Warning Reset | Error/Warning Reset | — | AV | 30002 | R/W |

¹⁾ According to the settings <Imperial> or <Metric> in the RO-E controller software

²⁾ Refer to malfunction list in the Condair RO-E operation manual for a description of the malfunction codes

5 Troubleshooting

5.1 Operating trouble list

| Problem | Solutions |
|---|--|
| Condair Integrated Controller does not respond to humidity values or demand values written over BACnet. | <ul style="list-style-type: none">– Check that Condair Integrated Controller is configured to be controlled via BACnet (see Section 3.3.3.1). Note: If "Source" in the controller settings is set to "Analog" the Condair Integrated Controller will look for a control signal connected to the driver board only. |
| The device will not respond to control signal connected to the driver board. | <ul style="list-style-type: none">– Check under "Menu > Password: 8808 > Controls > Signal Settings" that parameter "Source" is configured for "Analog" control. |
| The BACnet node ID, BACnet IP port or BACnet MS/TP MAC settings are not accepted. | <ul style="list-style-type: none">– Check if the input is within the valid value range. |
| Intermittent Communications. | <ul style="list-style-type: none">– Check whether the wire type and run length meet the requirements of the corresponding network.– Look for wire runs in close proximity to equipment generating significant electrical noise (such as VFD's, medical equipment, X-ray machinery, servers, etc.).– Check that wire shield is terminated at one end only.– Confirm correct polarity of conductors at each device.– Check BACnet/LonWorks addresses for conflicts with any device. Note: Each device on the network must have a unique address. |

| Problem | Solutions |
|--|--|
| No communication can be established | <ul style="list-style-type: none"> – Check that latest software version of the device is installed. – With BACnet IP: Check the IP address, subnet mask and default gateway. These parameters must be in the same range as the client (client = BACnet device, for example a building controller or workstation requesting data from the humidifier) Check if other network participants or firewalls are blocking BACnet messages. – With BACnet MS/TP: Ensure that all devices in the MS/TP network use the same baud rate. Notice: Baud rate 76800 is not a standard baud rate and is not supported by many devices or notebooks. Check the times of the properties "APDU Segment Timeout" and "APDU Timeout" in the Device object. These should be the same for all subscribers in the same BACnet MS/TP network. – With BACnet MS/TP Master: Check the MAC address. This should be in the range 0-127. The value in the Device Object property "Max Master" must be equal to or higher than the MAC address. – With BACnet MS/TP Slave: MS/TP slave devices cannot be detected automatically via the "Who-is" BACnet service and therefore have to be manually added to the network. |
| Invalid data | <ul style="list-style-type: none"> – Check BACnet addresses for conflicts with any device. Note: Each device on the network must have a unique address. |
| Wrong values (e.g. temperature, pressure, mass flow) are shown via BACnet. | <ul style="list-style-type: none"> – Check software version of the Integrated Controller. – Check the "Units" setting under "Menu > Password: 8808 > General > Region". |
| More variables or additional information is required from the Condair Integrated Controller. | Contact Condair Technical Services for additional support. |

6 Appendix

6.1 Object abbreviations

| | |
|-----------------------|--|
| AI = Analog Input | Analog value, readable |
| AO = Analog Output | Analog control signal, readable and writable (with priority) |
| AV = Analog Value | Analog setting, readable and writable |
| BI = Binary Input | Binary state value, readable |
| BV = Binary Value | Binary value, readable and writable |
| DEV = Device Object | Device object, some properties are writeable |
| MI = Multistate Input | Multistate status value, readable |

6.2 Declaration of Conformity for the implementation of BACnet protocols (PICS)

INTEGRATED CONTROLLER BACnet Protocol Implementation Conformance Statement

Basic Information

| | |
|-------------------------------|--|
| Issue date: | September 2021 |
| Document Revision: | 3.10 |
| Vendor Name: | Condair Group AG (Vendor ID: 976) |
| Product Name: | Integrated Controller 2.0 |
| Firmware Revision: | v0.6.5 |
| Application Software Version: | v0.9.5 |
| BACnet Protocol Revision: | Version 1, Revision 22 |
| Product Description: | The products are humidifiers, adiabatic coolers or water treatment units |

BACnet Standardized Device Profile

- B-SS BACnet Smart Sensor
- B-SA BACnet Smart Actuator

BACnet Interoperability Building Blocks Supported (BIBBs)

- DS-RP-B Data Sharing, Read Property-B
- DS-WP-B Data Sharing, Write Property-B
- DS-RPM-B Data Sharing, Read Property Multiple-B
- DS-COV-B Data Sharing, Change of Value-B*
- DM-DOB-B Device Management, Dynamic Object Binding-B*
- DM-DDB-B Device Management, Dynamic Device Binding-B*
- DM-RD-B Device Management, Reinitialize Device-B

*not supported by MS/TP slave

Standard Object Types

- Analog Input
- Analog Output
- Analog Value
- Multi State Input
- Multi State Value
- Binary Input
- Binary Value
- Device

Optional Supported Properties

Description, Reliability**, COV Increment
Description, Reliability**, COV Increment, Min Pres Value, Max Pres Value
Description, Reliability**, COV Increment
Description, Reliability**, State Text
Description, Reliability**, State Text
Description, Reliability**, Active Text, Inactive Text
Description, Reliability**, Active Text, Inactive Text
Description, Location (both read- and writeable)
Max Segm Accepted
APDU Segm. Timeout, APDU Timeout (both read and writeable)
Active COV Subscriptions*
Max Info Frames (only BACnet MS/TP)
Max Master (read- and writeable BACnet MS/TP Master)
Local Time, Local Date
Last Restart Reason, Time of Device Restart
Restart Notification Recipients

*not supported by MS/TP slave

**Depending on the object, not supported by all object

BACnet MS/TP:

Description, MAC Address
Max Master* (read- and writeable)
Max Info Frames* (read- and writeable)

*not supported by MS/TP slave

BACnet IP:

Description, MAC Address, BACnet IP Mode, BACnet IP Address, BACnet IP UDP Port,
BACnet IP Subnet Mask, BACnet IP Default Gateway, BACnet IP DNS Server
FD BBMD Address (Mode Foreign only, read- and writeable)
FD Subscription Lifetime (Mode Foreign only, read- and writeable)

2111 / EN

- Network Port Object:

The following conditions apply to all object types

- Objects may be neither dynamically created nor deleted
- Does not support any optional properties unless they are listed
- No proprietary properties are implemented
- No additional properties may be written, except they are listed above or required by the BACnet specification

Data Link Layer Options

- BACnet IP (Annex J)
- BACnet IP (Annex J) Foreign Device
- BACnet MS/TP Master (Clause 9) Baud rates: 9'600, 19'200, 38'400, 57'600, 76'800, 115200
- BACnet MS/TP Slave (Clause 9) Baud rates: 9'600, 19'200, 38'400, 57'600, 76'800, 115200

Segmentation Capability

Segmented requests and responses are supported. Window size: 8

Device Address Binding

Static address binding is not supported

Network Options

No networking options are supported.

Character Sets Supported

ANSI UTF-8

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Attention: Date:
Company: Fax #:
From: Page: of
Subject:

☐ FOR YOUR INFORMATION ☐ RESPONSE REQUESTED

MESSAGE:

Distributor / Agent P.O. Number: Sales Order Number:

Desired interface option:

- ☐ BACnet IP
☐ BACnet MS/TP Master
☐ BACnet MS/TP Slave

Settings for BACnet IP only:

- IP Address:
- Subnet Mask:
- Default Gateway Address:
- BACnet Node ID (Device Instance):
- BACnet IP Port:

Settings for BACnet MS/TP only:

- MAC Address BACnet MS/TP:
- Baud rate:
- BACnet Node ID (Device Instance):

Notes

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